

SYSTEMS AND METHODS FOR DECODING REDUNDANT MOTION VECTORS
IN COMPRESSED VIDEO BITSTREAMS

Abstract of the Disclosure

The invention is related to methods and apparatus that decode robustly encoded video bitstreams. One embodiment of a decoder can advantageously reconstruct a predictive-coded video object plane (P-VOP) from a standard motion vector and the previous frame; from a redundant motion vector and a frame prior to the previous frame; or from both. Advantageously, this permits the decoder to display a frame based on a reconstructed VOP in the presence of unfavorable environmental conditions, such as interference, delays, and the like, which could otherwise corrupt a previous frame that is used as a reference by a standard decoder, such as a standard MPEG-4 decoder. One embodiment is advantageously backwards compatible with standard MPEG-4 compliant bitstreams and retrieves redundant motion vector information from user data video packets. One embodiment includes at least one extra frame buffer or memory, which stores a reference frame corresponding to a redundant motion vector.